C4c™ CMTS

System Release 8.2

New Features

- Integrated Service Class Agility
- Ethernet Link Aggregation
- Upstream Drop Classifier Support
- Support for Cable Modem Extended Transmit Power with Upstream Channel Bonding
- Policy-Based Routing (PBR) Recursive Next Hop
- Subscriber Management Filters Expansion
- Support for Cable Modem Loss of AC Power

The ARRIS C4c CMTS is a compact DOCSIS® 3.0 platform based on the proven hardware and software of the larger C4 CMTS solution. It allows an operator to cost-effectively deploy DOCSIS, PacketCable™, DSG/ADSG, and PacketCable Multimedia (PCMM™) services in small-to-medium size headends where space and power are often limited. The C4c CMTS supports DOCSIS 1.1/2.0/3.0 and PacketCable features, providing operators with a large array of Quality of Service capabilities to deploy revenue-generating services.

A number of important new capabilities are incorporated into Rel. 8.2. Cable modems bonding multiple upstream channels are enabled with Rel. 8.2 software to employ a higher per-channel transmit power that creates an operational improvement for many cable operators. Rel. 8.2 also includes Integrated Service Class Agility that allows operators to effectively manage bandwidth consumption within their DOCSIS network using tools built into the C4 CMTS. The release also provides support for Link Aggregation of the 1 Gbps Ethernet ports of the RCM. Those operators desiring to use Upstream Drop Classifiers in their cable modem config files may do so with Rel. 8.2 software. Other operations-benefitting enhancements in Rel. 8.2 include expansion of the Subscriber Manager Filter capacity to 63 entries per Filter Group and a new Recursive Next Hop capability for the existing Policy-Based Routing (PBR) function.

All of these features are supported at maximum subscriber density and with independent configuration of upstream and downstream channels using dedicated upstream (12U and 24U) and downstream (16D and XD) CAMs.

Product Flyer

The ARRIS C4c CMTS features an 8 slot chassis at 7 RU with a mid-plane-based architecture. Active modules insert through the front of the chassis, and physical interface cards (PICs)—which host network connections such as RF cables—insert through the rear. The following modules are supported:

- System Control Module (SCM), including support for the SCM II, SCM II EM, SCM II EM(U), and SCM 3
- Router Control Module (RCM)
- Downstream and Upstream Cable Access Modules (CAMs) — 16D CAM, XD CAM, 12U CAM, 24U CAM

A 2Dx12U CAM must be configured as a 12U CAM with C4c CMTS Release 8.2 (2Dx12U CAM not supported).

Integrated Service Class Agility

Using Service Class Names, this feature creates a self-contained function for subscriber bandwidth management. The operator can configure parameters for subscriber bandwidth usage, and if those parameters are exceeded, a different SCN is dynamically and hitlessly assigned to subscriber. Rel. 8.2 also includes a means of making these changes in Service Class Name assignment manually.

Ethernet Link Aggregation

This capability operates with the RCM's 1GigE ports. Link aggregation groups (LAGs) can be configured with up to eight (8) 1GigE links each. A LAG can consist of 1GigE links from both RCMs, and link aggregation can be used in conjunction with ECMP Routing. Min Links is included, which provides a threshold for taking a LAG out of service.

Support for Cable Modem Extended Transmit Power with Upstream Channel Bonding

Introduced as a CableLabs® ECN, this feature requires support on both CMTS and modem. It modifies the initial DOCSIS 3.0 specification that lowered the per-channel maximum modem transmit power for some combinations of bonded upstream channels. The feature allows an increase in the modem transmit power as long as max per-channel power does not exceed 61 dBmV. Support and capabilities vary by modem.

Policy-Based Routing (PBR) Recursive Next Hop

A recursive look-up determines the next-hop IP address, and PBR forwards the packet to that address (rather than via packet's Destination IP address).

Subscriber Management Filters Expansion

Max number of entries in each filter group is increased to 63. The overall number of rules (total filter groups * average entries per group) is still limited to 16,384.

Support for Cable Modem Loss of AC Power

The DOCSIS 3.0 MULPI specification defines a set of CM Status messages, one of which indicates when the modem has lost AC power. When the C4 CMTS receives this message, it will reconfigure the modem to 1x1 bonding to reduce CPE power consumption and extend operating time while on battery. When the C4 CMTS receives the "AC Restored" CM Status, it restores the original MxN bonding configuration.

www.arrisi.com

Find more information about the C4c CMTS and C4 CMTS and other ARRIS products at www.arrisi.com.

Customer Care

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